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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/017,077 | 12/14/2001 | James L. Filson | 353 USF | 7531 |

23774 7590 05/14/2002

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EXAMINER

CINTINS, IVARS C

ART UNIT PAPER NUMBER

1724


DATE MAILED: 05/14/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-6

Office Action Summary

| | | |
|--------------------------------------|--------------------------------------|---|
| Application No. 10/017,077 | Applicant(s) Filson et al. | |
| Examiner Ivars Cintins | Art Unit 1724 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 29, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5 6) ☐ Other:

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The disclosure is objected to because the first sentence of the specification following the title fails to contain a reference to Applicant's parent application (i.e. Serial No. 09/113,982, filed July 10, 1998, now U.S. Patent No. 6,346,195), as required by 37 C.F.R. § 1.78(a)(2). Also, the relationship between this application and the parent application (i.e. a division) must be indicated, as further required by 37 C.F.R. § 1.78(a)(2).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-19 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The term "ion exchange unit operation" (claim 12, line 7; and claims 17-19, line 2) is vague, and indefinite as to the structural limitation intended. Similarly, claims 13-16 are vague and indefinite as to the structural limitations contained therein, since the recited "wastewater" does not appear to be a structural element of the recited apparatus. Also, the parenthetical expressions recited in claims

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14 (line 4) and 16 (line 4) are deemed to be redundant, and hence somewhat indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Faylor et al (U.S. Patent No. 3,870,033). The reference discloses (see Fig. 2) a system comprising a carbon bed (42, 45), and an ion exchange unit (52, 54, 56) downstream from the carbon bed; and this is all that is required by the apparatus limitations of claims 12-16. Applicant should note that the intended use of a device (i.e. for removing metal ions from wastewater containing solids sized in the range of about 0.01-1.0 μm in an amount higher than about 50 mg/l) is not a structural limitation, and hence cannot be relied upon to patentably distinguish apparatus claims 12-16. It is well settled that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus

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satisfying the claimed structural limitations. *Ex parte Masham*,
2 USPQ2d 1647 (1987).

The following is a quotation of 35 U.S.C. 103(a) which forms
the basis for all obviousness rejections set forth in this Office
action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Faylor et al in view of Katzakian et al (U.S.
Patent No. 3,928,192). Faylor et al discloses the claimed
invention with the exception of the type of ion exchange resin
employed. Katzakian et al discloses (see col. 5, last line
through col. 6, line 1) an ion exchange resin of the type
recited; and it would have been obvious to one of ordinary skill
in the art at the time the invention was made to substitute the
ion exchange resin of Katzakian et al for the ion exchange resin
of the primary reference, since this secondary reference ion
exchange resin is capable of removing ions from a liquid in
substantially the same manner as the ion exchange resin of the
primary reference, to produce substantially the same results.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

I. Cintins
May 13, 2002


Ivars C. Cintins
Primary Examiner
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